APR 14 1932

THE JOURNAL OF PHILOSOPHY

VOL. XXIX. NO. 7: MARCH 31, 1932

CONTENTS

Mr. Lewis and the A Priori: ARTHUR E. MURPHY 169

The Metaphysics of Space and Time: V. F. LENZEN 182

Book Reviews:

Schneider's Samuel Johnson: His Career and Writings: WOODBRIDGE RILEY 188

Schneider's The Puritan Mind: WOODBRIDGE RILEY 190

Journals and New Books 192

Notes and News 194

PUBLISHED FORTNIGHTLY
BY THE
JOURNAL OF PHILOSOPHY, INC.

THE JOURNAL OF PHILOSOPHY

All communications to the Editors should be addressed to Professor FREDERICK J. E. WOODBRIDGE, or Professor WENDELL T. BUSH, or Professor HERBERT W. SCHNEIDER, Columbia University, New York.

Subscriptions and advertisements should be sent to THE JOURNAL OF PHILOSOPHY, Prince and Lemon Streets, Lancaster, Pa., or 515 West 116th Street, New York. The annual subscription price (twenty-six numbers) is $4.00 and the charge for single numbers is 20 cents. Advertising rates will be forwarded on application.

THE JOURNAL OF PHILOSOPHY is owned by The Journal of Philosophy, Inc., 515 West 116th Street, New York, and published at Lancaster, Pa. President, Wendell T. Bush; Vice-President, Herbert W. Schneider; Treasurer, Frederick J. E. Woodbridge; Secretary, Iris W. Wilder.

Entered as second class matter, March 18, 1921, at the Post Office at Lancaster, Pa., under Act of Congress of March 3, 1879.

THE FACSIMILE TEXT SOCIETY announces the publication of a reproduction of one of the earliest English books to plea for free-thought and experimental science, "The Vanity of Dogmatizing" (1661)—price $3.50. The book was written by Joseph Glanvill, an Anglo-Catholic priest and member of the Royal Society, who opposed the contemporary Oxford Aristotelianism and dogmatic Puritanism. Philosophers interested in the history of their discipline will be interested in the Facsimile Text Society which reprints books that are now inaccessible, though of great significance in their particular fields. Membership in the Society ($5.00 a year) allows one to purchase books at 25% discount—no charge being made for the first $5.00 worth of purchases. Address all communications to The Facsimile Text Society, 2960 Broadway, New York City.

ESSAYS
in honor of
JOHN DEWEY

Twenty-nine essays written by former or present colleagues of John Dewey and presented to him on the occasion of his seventieth birthday. Students and admirers of America's greatest living philosopher will find in the book a single source of inspiration and an intimation of Dewey's wide influence.

Remaining copies, 75c

HENRY HOLT AND COMPANY, Inc.

One Park Avenue New York

VOL. XXIX, No. 7. MARCH 31, 1932.

THE JOURNAL OF PHILOSOPHY

MR. LEWIS AND THE *A PRIORI*

IT is my purpose in this paper to criticize and, so far as may be, to disprove a theory about the nature of knowledge, and of *a priori* knowledge concerning physical reality in particular, which appears to be one that Mr. Lewis defends in *Mind and the World Order*. I say "appears" advisedly, since it is quite plain that he does not always maintain it; indeed, as I shall later try to show, he provides us in this same book with all the materials necessary for its refutation. And some of my colleagues have argued that he never "really" holds it at all, but only seems to do so through the use of a terminology whose associations are, to say the least, misleading.

Whether or not this is in fact the case I am quite unable to say. At any rate, the view in question is widely current among us, and has gained considerable aid and comfort from a not unplausible interpretation of Mr. Lewis's statements about the *a priori*. To isolate this to my mind objectionable view, and to show that it is flagrantly inconsistent not only with sound doctrine on the subject, but with the excellently sound doctrine which Mr. Lewis himself lays down elsewhere in this same book, may serve in a measure to clarify this important problem.

The theory in question I will call the "dialectical" theory of truth, or the theory of truth as dialectical. And I shall limit myself to a discussion of the rôle of such dialectical truth in our knowledge of the external world—what Kant would have called the phenomenal world—as contrasted with pure experience on the one hand and with pure concepts on the other. According to this "dialectical" theory, the truth about the external world, such truth for example as physics claims to afford, is determined in part by the interpretative attitude of "the mind." In its simplest form this seems to mean (*a*) that the truth about physical objects depends on what we mean by them—on the way in which we "freely" interpret the data of experience, (*b*) that this interpretation is addressed merely to ourselves and hence needs no external support, and (*c*) that it can be maintained *as knowledge of physical reality* no matter what experience may be, not because it is able to delimit

experience in advance, but precisely because it does not claim to do so. Being equally compatible with any empirical alternative, it can be held no matter what the subsequent course of events may reveal. This amounts to saying that there is a truth about physical reality which depends simply upon the way we interpret it, and that in respect of this truth—though, of course, of no other—the mind legislates for reality. This is the view that I shall criticize, and it is one that Mr. Lewis appears sometimes to defend. Since in fairness to its defenders we should see it at its best, I propose to let it speak in terms of those aspects of his theory which seem to support it.

The basis for the view is found in a situation with which Mr. Lewis deals at length. The truth or falsity of a judgment is plainly indeterminate apart from a specification of its objective, of what it is about. And recent doctrines about the relativity of knowledge in various fields have brought us to see that it is not so easy as men had previously supposed to know what one is talking about. The term "reality," for example, has "a curious complexity." For "the adjective 'real' is systematically ambiguous and can have a single meaning only in a special sense. The ascription of reality to the content of any particular experience is always elliptical: some qualification—material reality, psychic reality, mathematical reality, is always understood. And whatever is real in one such sense will be unreal in others. Conversely, every given content of experience is a reality of one sort or other; so that the problem of distinguishing real from unreal, the principles of which metaphysics seeks to formulate, is always a problem of right understanding, of referring the given experience to its proper category" (page 11).[1]

I have quoted this passage at length because I think it crucial for much that is to follow. So long as one believes, as some of our contemporaries still do, that there is just *one* "right" meaning for reality the question as to what we are talking about in judgments about reality does not arise. We *must* be talking about the Absolute, or the feeling of feelings, or the motion of electrons, even when we *seem* to have something quite different in mind. Once realized, however, that the term requires further specification, and it becomes evident that *apart from such specification* the truth is simply indeterminate. Is "finite mind" real? Is it real in what sense? *It all depends on what you mean by "real,"* on how you interpret this term. And this interpretation, clearly, is the work of the mind.

[1] All page references are to *Mind and the World Order*, New York, 1929. All italics in quotations are in the text itself.

Evidently the recognition of plural reference, of systematic ambiguity in the categories of thought apart from some further context of relatedness, does raise the problem of meaning, of interpretation, in a unique form. And since I wholly agree with Mr. Lewis in the belief that most descriptive terms, from "length" to "reality," do possess such systematic ambiguity in their ordinary philosophical usage, I welcome the inquiry into the implications of the specification of meanings which it seems so urgently to require.

There is, then, a sense in which whether a judgment is *true* depends upon what the judgment *is*—i.e., on what it means. Is a given object three feet long? It depends on what you mean by "three feet," and because no one measure-system is in itself *the* correct one, it follows that "the mind" must choose between these various meanings in order to specify a determinate object of judgment. Apart from such choice of reference the judgment that "this object is three feet long" is neither true nor false, but simply indefinite. This is the point of departure for theories that take relativity seriously in their account of knowledge. We shall return to it in the sequel.

We are now to apply this general analysis to the status of "the datum" in knowledge. There is a brute fact element in experience, something not merely given but coercively given, which so far as it goes is authoritative in knowledge as nothing else can be. Mr. Lewis is emphatic on this point. But it is equally the case that this "given" is not in itself completely coercive in most of our judgments about the natural world, i.e., whenever we are judging about the sort of reality that is more than mere qualitative content. Being as such equally compatible with different hypotheses about physical objects, it does not force us to accept any one alternative rather than another. It follows that so far as the datum goes the mind is in a measure "free" in its interpretations of any objects other than data, to which it may refer. An interpretation which might have been different for exactly the same given experience is made on some other ground than mere givenness; it is "freely" taken, and, if we divide knowledge into the datum and the work of the mind, falls in the latter rather than in the former division.

This at times seems to be precisely Mr. Lewis's view of the matter. For "The two elements to be distinguished in knowledge are the concept, which is the product of the activity of the thought, and the sensuously given, which is independent of such activity" (p. 37). The datum is that to which thought must conform since "If there were no datum given to the mind then knowledge must be contentless and arbitrary; there would be nothing which it must be true to" (p. 39); and in matters of interpretation the mind is

not wholly determined by the datum: "In such problems (of interpretation) the mind finds itself uncompelled save by its own purposes and needs. What is fixed datum and must be conformed to is only that welter of the given in which not even the distinction between real and unreal has yet been made. The rest is completely and exclusively our problem of interpretation" (p. 265).

Now what about this interpretation itself? That it transcends the given we have seen. But it refers, nominally at least, to a reality other than the given, which it pretends to qualify. Is it not objectively determined, so far as it claims to be true, by its relation to this further object? Can we explain the truth of judgments about physical objects by referring to the fact that "the datum" does not fully specify their nature, and that, as a consequence, we are not completely determined *by it* in our judgment *of them?*

Mr. Lewis answers with the following decisive statement. "That only can be a priori which is true *no matter what.* What is anticipated is not the given but our attitude toward it; it formulates an uncompelled initiative of mind, our categorial ways of acting. Truth which is a priori anticipates the character of the *real:* otherwise it would possess no significance whatever. The real, however, is not the given as such, but the given categorially interpreted. In determining its own interpretations—and only so—the mind legislates for reality no matter what future experience may bring" (p. 197).

The truth about our interpretations is free and can be determined in advance of experience. It is, hence, "*a priori,*" because it is addressed to ourselves, not to subsequent experience. Thus "Knowledge of such a priori principles requires only reflective self-consciousness, because it is simply knowledge of those criteria which we apply in classifying experience in one or another fashion, interpreting it in one or another way. A categorial interpretation . . . does not preclude any imaginable or unimaginable content of experience in the future, but only precludes our interpreting it in a fashion contrary to our predetermined attitude or bent" (pp. 227–228). It is obvious, consequently, that "definition, classification and inference represent no operation in the world of things, but only our categorial attitudes of mind" (p. 247). And finally, "The a priori does not dictate to nature but concerns our interpretation of empirical facts" (pp. 304).

The position, so far, seems straightforward. The truth of an interpretation can be independent of the datum because it is not about the datum. It can be independent of the future course of experience because it makes no statement about that experience. Nor does it "dictate to nature," but is simply addressed to ourselves. So far so good.

Yet the *a priori* is supposed to provide us some knowledge about physical reality. As Mr. Lewis is later to argue, it is because we can be certain *a priori* of some such principles that in our study of physical reality we have "a basal minimum of law." How can the mind thus legislate for reality by means of commands addressed *to itself?* This is the paradox that still requires explanation. The answer is that our legislation is merely definitive, explicative, it concerns the meanings we put upon experience, and meanings are preëminently "of the mind." To say that "all men are mortal," if it is taken as explicating the *meaning* of the term "man," does not legislate out of existence any possible reality since an immortal man is by definition not possible. And that definition is of our own making. "Not only is the meaning assigned to words more or less a matter of choice—that consideration is relatively trivial,—but the manner in which the precise classifications which definition embodies shall be affected, is something not dictated by experience. If experience were other than it is, the definition and its corresponding classification might be inconvenient, useless or fantastic, but it could not be false. Mind makes classifications and determines meanings; in so doing it creates that truth without which there could be no other truth" (p. 240).

This statement confers really surprising privileges upon a definition. On the one hand, as a mere definition, it "cannot be false"; on the other, equally as a definition, it "creates truth." How both of these assertions can be true at once is a further question; but that they must both be true, that a definition is *at once* merely addressed to ourselves, as a way in which *we* classify things, *and also* legislates for the things in question, is the curious conclusion to which we are driven.

The justification for it is discovered not in a new analysis of *reality,* but only in a renewed reference to the indeterminate character of given experience. We can maintain these definitive laws as legislation for reality, because given experience can never disprove them. "The a priori as thus definitive or explicative, representing principles of order and criteria of reality . . . is a truth about our own interpretative attitude . . . imposes no limitation upon the future possibilities of experience" (p. 231). And this because "The proposition that is a priori does *not* assert any limitation of experience; it only asserts that whatever lacks some essential property, X, is not to be classified under some concept, A" (p. 303).

The legislation of mind is "free," moreover, in this final sense that it "has alternatives," and this is the very mark and sign of its dominion. "What is a priori does not compel the mind's acceptance. It is the given experience, the brute-fact element in

knowledge, which the mind must accept willy-nilly. The a priori represents the activity of mind itself; it represents an attitude in some sense freely taken. That we elicit some formula as a principle means that we take it as forbidding something . . . which in some sense has significance. That which is incapable of any alternative is utterly devoid of meaning. The necessity of the *a priori* is its character as legislative act. It represents a constraint imposed by the mind, not a constraint imposed upon the mind by something else" (pp. 196–197). And, most conclusively, "the a priori principle which is definitive, and not a material truth of the content of experience, *has alternatives*" (p. 232).

We have now before us a complete conspectus of this dialectical theory of truth. The mind legislates for reality because there is a kind of truth about the external world which is *at once* a matter of definition, neither true nor false, *and also* prescribes the nature of the objects that are to exemplify it. This truth can be maintained independently of experience because an experience could only refute it in case it provided a relevant instance; while the decision as to whether or not it is a relevant instance is itself a mental interpretation, a choice freely made. And this choice is properly called legislative because there were possible alternatives which the mind might have adopted instead; it is the result of our active initiative.

And as we have seen there are passages in *Mind and the World Order* which seem to support this theory. I maintain that it is invalid from beginning to end. I should hesitate to make such an assertion on my own authority; fortunately that is not necessary. Mr. Lewis has himself contradicted its principal theses definitely and in detail, and it is to the weight of his judgment that I shall appeal throughout, in attempting to show (1) that "the mind" is not "free" or legislative with respect to the truth of any judgment about objects; (2) that the "interpretative principles" of mind, so far as they claim to be about physical reality at all, are not simply addressed to ourselves and hence their truth is *not* "created by mind"; and finally (3) that all given experience falls under one category or another quite independently of how we interpret it, that in so far as it is thus categorized it is limited by a generalization that refers to it, and that to the assumption that this limitation exists there is, on Mr. Lewis's own showing, no alternative whatever.

1. It is true that in its judgments about physical reality the mind is uncompelled by the datum *as such*. But that is simply because in all such cases the datum as such is not the object about which it is judging. The minimum object of knowledge, so far as

Mr. Lewis is concerned, is the datum—or quale—in determinate relationships to other actual or possible experiences. "What is essential for understanding and for communication is not the quale as such, but that pattern of its stable relations in experience which is what is implicitly predicated when it is taken as a sign of an objective property" (pp. 124–125). Moreover, it is not about the datum even as standing in certain relations, that objective judgments are possible. "Whatever the uniformity of reality required for knowledge may mean, it *cannot* mean a fixed and uniform sequence in which the given experience is one complete term" (p. 358).

Now if the datum as such is not the subject of my judgment it is not merely true but a truism that it does not in itself determine the truth of that judgment—for the judgment is about something else. I am also not "compelled" in my estimate of Mr. Hoover's administration by the present output of textbooks on anthropology, since the state of the book trade in this particular is not conclusive one way or another on the point at issue. Why should it have seemed important, then, to emphasize this not very recondite point?

Precisely because on the dialectical theory it is assumed that if I am free so far as the datum is concerned I am free altogether. "The rest is purely and simply my problem of interpretation." But quite emphatically it is not. For to classify the datum as an instance of a certain concept is to predict of it that it will stand in discoverable relations to other experiences, such that *if* I follow up my present hypothesis the results anticipated will occur. "Thus the classification of what is presented and the predicted relationship of it with further experience are *one and the same thing.* This implicit prediction is at once a general principle and our concept of the object" (p. 134).

Further, "The ascription of reality is, then, the affirmation of possibility, and the kind of reality ascribed conforms to the nature of the possibility affirmed" (p. 183). If we now recall that it was in classifying the datum as reality of one or another sort that the mind was said to be "legislative," the following statement is simply crushing as against the "dialectical" view. "The 'if' here [in the if-then propositions which *are* our 'interpretation' of the object] depends upon our own active nature for its meaning, as has been pointed out, but the content of the 'then' clause, and the truth of the proposition as a whole, are things with respect to which the knowing mind is not dictator but dictated to. I may confront the given with different attitudes and purposes; I may proceed into the future in different ways. But *what I should then find;* what eventuations of experience are genuinely possible; that is something independent of any purpose or attitude of mine. These I seek

correctly to anticipate in my present interpretation of the given. If they do not obtain in reality, my present "knowledge" is false. Whether they obtain or not, is determined independently of my mind. If not, then it is not determined at all, and knowledge and error are, both of them, purely subjective and meaningless" (p. 193). These relations, these possibilities of experiences, are what our concept of the object is about, and we now see that there is nothing more clearly independent of any attitude or legislative act of our own.

2. The dialectician will next object, no doubt, that while this holds good of empirical connections, it does not hold for those that are definitive and hence, like any definition, neither true nor false. Now there is a sense in which a declaration about our intentions as to the use of words is neither true nor false, but that is not the meaning of definition that is relevant here. For the dialectician must hold that definition is *at once* only such a declaration of intention *and also* a prescriptive law for physical reality. Mr. Lewis tells us that "*all* definition and *all* concepts exercise this function of prescribing fundamental law to whatever they denote, because everything that has a name is to be identified with certainty only over some stretch of time. The definition provides criteria of the thing defined which, in application, become necessary and essential laws of its behavior" (p. 257). So a definition can "correspond to a natural cleavage" and be "correlated with important uniformities of behavior," which a command addressed merely to ourselves could hardly do. And so, although he has once told us that "the a priori does not dictate to nature" (p. 304), Mr. Lewis later states that "as the matter is usually conceived, this knowledge which we find to be a priori would be included in what is meant by "knowledge of nature," since it delimits, for example, the physical and prescribes basic laws which must be true of all physical reality" (p. 311). And so far is Mr. Lewis from rejecting the "usual conception" that he finds in this *a priori* delimitation of the physical a "basal minimum of law" (p. 322) on which the natural sciences can depend.

If a definition is *merely* a declaration of intention as to what *we* will do, it does not provide certain knowledge of physical objects, since it is, as such, neither true nor false. If it does "provide necessary and essential laws," then we must accept the responsibility of inquiring whether "natural cleavages" will or will not sustain them. It is only by holding both that a definition "cannot be false" and also that it "creates truth" that the dialectician can maintain his position.

3. There is still the consideration that "the *a priori*" is free with respect to experience, since experience can not refute it, and

hence, whatever the "independent reality" may be, it is always possible *in experience* to retain an attitude freely taken. This contention rests, however, on a really shocking ambiguity in the use of the term "experience," and one which Mr. Lewis himself renders peculiarly vulnerable. Of course *bare* experience can not refute any generalization, since it does not as such provide a relevant instance. *"This"* can not disprove the assertion that "all men are mortal" unless "this" is a man. And it is always open to me to hold that "this" is not a man. Nay, more, if "this" means the bare datum as such, I can say most positively that this is *not* a man, since, as Mr. Lewis has shown, the datum as such is *never* the subject of generalizations of this sort. Experience is then not "limited" by my interpretations, since experience is not the subject to which they refer. So far as they are concerned, anything in the way of future experience is possible. "The a priori . . . imposes no limitation upon the future possibilities of experience" (p. 231). And again: "They [our interpretative attitudes] dictate nothing as to the content of experience and no experience can conceivably prove them invalid" (p. 266).

But this is not the way Mr. Lewis usually writes of experience. "The possession of the concept or meaning is utterly irrelevant to any experience whatever, unless we could—with sufficient time and attention at least—say whether certain eventualities of experience would or would not be compatible with its application" (p. 286). Now if the *a priori* imposes no limitation on future experience then the whole distinction between what is and what is not compatible with it becomes simply meaningless, and the *a priori,* failing to provide a test of such compatibility, becomes "utterly irrelevant to any experience whatever." Yet Mr. Lewis rightly holds that *a priori* concepts are not thus irrelevant, but rather, like purposes, "must take their shape and have their realization in terms of experience; the content of the given is not irrelevant to them" (p. 24).

In another place he speaks of "the given" as excluding certain interpretations, on the ground, presumably, that the interpretation is incompatible with them. "I can apprehend this thing as pen or rubber or cylinder, but I can not, by taking thought, discover it as paper or soft or cubical" (p. 52). Yet surely, being or not being paper is no part of the brute "quale" as such. Again we read that "The qualia of the given are the clue to the applicability or inapplicability of concepts, and set the limits of conceptual interpretation" (p. 157). How this could be unless experience itself could contradict certain hypotheses, it is difficult to understand.

Hence if we treat of experience *as categorized,* not in its mere qualitative indeterminancy, we must hold of it that it *is* limited by

the *a priori*. And Mr. Lewis does hold exactly that. "When we study the sciences of physical reality, we have this a priori knowledge of principles to which the given must conform if it fall within the class of those phenomena which are significant in this connection. Thus we are provided, a priori, with a basal minimum of law within the field, as a sort of Archimedean point for all investigation" (p. 322).

But suppose the given does *not* fall within the class of such phenomena? This, too, is a matter of discovery, not of mental legislation. Even though we rule it out as unreal, we are still comforming to *its* nature. For "to be able to classify what is presented as 'unreal' or 'illusion,' though it may represent only superficial understanding, means nevertheless a very important understanding, precisely because it means that this context of experience is not relevant in the present connection, that it can not figure as a negative instance of an empirical generalization and so on" (p. 350).

Moreover, whatever in experience does not fall within *this* class, does fall within some other, and is hence limited in its own appropriate category. "Nothing is real in all categories; everything is real in some categories" (pp. 321–322). "What is not reality of one sort is reality of another; what we do not understand in one way we shall understand in another" (p. 225). And most emphatically, "every given content of experience is a reality of some sort or other" (p. 11).

We conclude, then, that every experience is limited in the categories under which it falls, that every given experience falls under some categories, and that whether or not it falls under a particular one is a question of objective relevance or irrelevance. Its nature in each case is perfectly determinate, and in no case is the mind free to legislate for it in its appropriate categories, or to discover it as other than it independently and determinately is.

Finally, the fact that there should be such limitation of experience is something absolutely inescapable, and something itself not made by mind. For there is no possible alternative. If experience were not limited in *some* fashion it would be simply inconceivable. "Since what any substantive concept denotes in experience is some definite sequence or set of such, there could be, in an experience that was subject to no limitation upon the all-possible sequence of given presentations, no recognition of things by their appearances as even probable" (pp. 370–371).

It is true that Mr. Lewis describes this requirement that experience should be limited in its possibilities as not itself a "limitation on experience" in precisely the opposite sense to that in which he formerly used the term. It is no doubt true that in eliminating

from the world the impossible we are not eliminating anything possible. But the decision as to what is possible and what is not is here most rigidly fixed. On the other hand, "The a priori is a peculiar possession of mind because it bears the stamp of mind's creation. And the criterion of creativity is not inevitability but precisely its opposite, the absence of impulsion and the presence of at least conceivable alternatives" (p. 213). Hence in the necessary limitation of the possibilities of experience we are dealing preëminently with that which is *not* the creative work of the mind, because there are no conceivable alternatives. I do not for a moment contend that Mr. Lewis actually means to hold that the denial of limitation with which he has ended—the absence of conceivable alternatives—is identical with the denial of limitation with which he began—the presence of conceivable alternatives. But I do hold that only when the two are identified—when we equate what the mind can not help thinking about an ordered world with what it "freely" elects to take as its own classification of the data of experience—does the dialectical theory of truth become even apparently plausible. And it is for that reason, among others, that the theory seems to me untenable.

I conclude therefore that no statements that truly prescribe laws to physical reality are made true by the decision as to how we shall classify the data of experience. The only statements in fact that are made true by our decision to mean one thing rather than another are those which assert that such in fact is what we have decided to mean by them. In all its knowledge—*a priori* or other—the mind intends to follow the nature of its subject-matter, not to legislate for it. "I am coerced only by my need to understand." True enough, but that is the most rigorous coercion of all. "For the purpose of knowledge is to be true to something that is beyond it. Its interest is to be governed and dictated to in certain respects. It is a real act with a real purpose because it seeks something which it knows it may miss. If knowledge had no condition independent of the knowing act, would this be so?" (pp. 191–192). And clearly it is not just the datum that here "dictates" to knowledge, for the datum, as infallibly given, is not something that we may miss and, moreover, our awareness of it is, for Mr. Lewis, not knowledge at all. It is the object of our interpretation that "governs" here, and if the mind is "free" with respect to it, it must be because, in Rousseauistic terms, it is forced to be free. The most thorough-going realism could not ask for a more decisive statement.

Yet it is not wholly satisfactory simply to oppose one theory by its contradictory in this somewhat abrupt fashion. A really adequate criticism must account for the mistake in question—if such

it be—and exhibit it as a partial, though quite inadequate, expression of the truth. For, as Spinoza said, "just as light shows itself and darkness also, so truth is a standard of itself and falsity" (*Ethics,* Bk. II, prop. XLIII, note). It is the outstanding merit of this second view, which Mr. Lewis so emphatically holds, that it can give such an account of the dialectical theory from which its own results diverge so sharply. An exposition of this point will constitute our final evidence in its favor.

The plausibility of the dialectical theory rests throughout on a mistake about the relativity of knowledge which Mr. Lewis exposes with admirable clarity. It is perfectly true, as has been seen, that where a term—such as "reality" for example—is systematically ambiguous, a specification of meaning is required before statements that concern "the real" can become determinately true or false. This is true, of course, not because the term refers to no object, but because it may refer to any one of many, and the selection of the one in question is essential for unequivocal reference. The determination of such reference does not make a proposition true; it is its object that does that. But it does indicate that object and hence bring us to the position where the proposition may be *either* true *or* false. To confuse this resolution of ambiguity with the creation of truth is a subtle and fashionable mistake, but one that needs special criticism for that very reason.

Thus when the sceptics of our own day observe sapiently of the truth of any proposition that "it all depends on what you mean" the appropriate retort is simply "Well, what *do* you mean?" Apart from specification of this sort the truth of the proposition can not be determined because it is as yet no definite proposition at all. To linger among these deliciously indeterminate half-lights of possible interpretation, to transform the need of reaching a decision about meanings into an apology for never doing so—this is dialectic in its most modern dress, the last resource in philosophy of that variety of literary loose talk to which some of the disciples of Santayana seem so fatally addicted.

But once meaning *is* specified the determinate truth or falsity of the proposition depends on what?—why, on the nature of its object, of course. The determination of meaning can only bring the proposition to the status of being *either* true *or* false—it can not decide between these alternatives. So exactly Mr. Lewis has made the point in the case of another instance of relativity—that of motion. One must specify which among possible reference systems one has in mind before one's assertion about the motion of an object can have a definite meaning. "That is, there are certain properties of the object, as an independent reality, which can only

be described in terms of some observer or frame of motion. But specify this relationship and the true description is thereby fixed. What is it that determines this? It can not be the relative motion already specified. It is fixed by the objective real character of the thing'' (p. 185).

So of experience. It has many possible connections, hence many meanings. No one of these—as opposed to any other—is exclusively prescribed for our attention by the nature of the ''datum as such.'' To select those relations which we mean to emphasize is a work for mind, and a vital one. In this sense, as Mr. Lewis observes, ''A large part of the scientific search is, thus, for *things worth naming*'' (p. 258). But once this selection is made, the truth depends on what we are talking about, on the object to which a proposition actually refers. It is the independent nature of the object, *thus specified,* that ''creates truth'' about it.

And thus to imagine that because we must know what we are talking about we are thereby absolved from the necessity of conforming to its nature, is a sheer *non sequitur.* It is parodied by Mr. Lewis in another connection in the following terms: ''The size of Caesar's toga is relative to the yardstick or to some other standard of measure. No size without a yardstick. The size of things is through and through yardstickian. To be sure the fallible yardstick in my hand may not determine size in general, but the yardstick in the Bureau of Standards determines both my yardstick and all sizes that there are. It creates size'' (p. 189). If the reader will compare this statement with one previously considered: ''Mind makes classifications and determines meanings; in so doing it creates that truth without which there could be no truth'' (p. 240), he will see that this latter assertion simply can not support the interpretation which a ''dialectical'' theory would put upon it.

It was Bacon, I think, who said that a little philosophy turns men from religion: but a deeper philosophy brings them back to it. So we might say of ''relativism'' in the theory of knowledge, that a little of it appears to discredit realism, but a more accurate account of it justifies an objectivity for knowledge more precise and more thoroughgoing than could previously have been claimed. Mr. Lewis's view of the relativity of knowledge is our best evidence that this second stage in the development has actually been achieved.

ARTHUR E. MURPHY.

BROWN UNIVERSITY.

THE METAPHYSICS OF SPACE AND TIME[1]

INTEREST in the metaphysics of space and time has been stimulated in contemporary philosophy by the physical theory of the relativity of space and time. In studying the various contributions to the subject I have felt that the solutions to certain fundamental problems have not been formulated as explicitly as possible. In the present paper it is proposed to attempt an explicit answer to some of these problems. I shall consider four questions which, by way of introduction, may be summarized as follows:

1. Is space, or space-time, a substance of relational structure?
2. What is meant by the metrical structure of space or space-time?
3. Is there a confusion in the theory of relativity between the concepts of space and of frame of reference?
4. To what extent does the relativistic theory of space and time require an operational theory of physical concepts?

Our first problem is the nature of space. Space has often been described as a receptacle, like a box, also as a framework. It appears to me that such characterizations are unsatisfactory, because receptacles and frameworks are things in space. One would then have to think of space as in space. As we shall see, however, the idea of framework suggests essential characters of space.

Again, space has been characterized as a medium. This description has been given, for example, by Boodin, and also by Weyl, who characterizes space-time as the extensive medium of the external world. From this point of view, space, or space-time, becomes a substance. My objection to the concept of space as a medium is that it is essential to a medium to be in space. How, then, is one to distinguish space and the media in space?

Space has also been described as a class of points. Such a description raises the question as to whether a point is a thing or a position. If we conceive of a point as a very small particular entity, that is, a thing, then, since the things in the universe can be analyzed into points, the concept of space would express the totality of things in the universe. Hence there would be no distinction between things in space and space. Thus if we define space as a class of points we must interpret a point as a position. I therefore conclude that position is a quality or relation which is manifested by things which are said to be in space. This result will be the basis of further discussion.

[1] Read at the meeting of the Pacific Division of the American Philosophical Association, Stanford University, Dec. 28, 1931. The writer wishes to acknowledge the helpful criticisms of Professor H. C. Brown.

The references in the paper are to J. E. Boodin, *A Realistic Universe*, H. Weyl, *Raum-Zeit-Materie*, H. Reichenbach, *Philosophie der Raum-Zeit Lehre*.

The essential character of space, then, is expressed by the proposition that things have position in space. The concept of position reciprocally implies that there are things which can occupy positions in space. Accordingly, I shall describe space as the ground of the manifold, or totality, of possible positions of things. A different phrasing, adapted from Einstein, is that space is the ground of the manifold, or totality, of possibilities of position of things. The concept of possible position implies that the position of one thing is a possible position for another. Thus the concept of possibility affords a basis for change in space. The concept of position implies that of thing in the sense that some positions must be occupied by things. I see no objection, however, to some unoccupied possible positions. In this way one might justify the concept of some empty space.

It has not yet been decided whether position in space is a quality or a relation. Is the character of position a quality like the color of a thing, or is it a relational property? The view proposed in this paper is that space, the ground of position, is a relational structure of the things which are said to be in space. The position of a thing is a property which manifests its relations to other things. Again, the extension of a rod might be viewed as a self-contained quality of the rod; we shall, however, analyze the property of extension into a relation between the end points of the rod.

A difficult problem in a relational theory is that of the existence of empty space. Now the relational structure which is space is characterized by the fact that things exist which are in spatial relations. Hence the possibility of a wholly empty space is not to be considered; space is at least partially filled. A position in space is defined to be empty if in the process of being occupied by a thing there occurs no contiguous action upon some other thing. Thus we may conceive of empty parts of space even in a relational theory.

Things in space are terms to spatial relations. Thus the relational structure provides the ground for the property of position, and in a loose sense it may be viewed as the framework, receptacle, or medium of the things which are said to be in space. I conclude, therefore, that the various characteristics which were suggested by our initial attempts at definition are expressed by the description of space as the relational structure which is the ground of the manifold, or totality, of possibilities of relative position of things.

Our second problem is the specification of the structure of space, in particular, its metrical structure. The problem of metrical structure is raised by the question, is physical space Euclidean or non-Euclidean?

In the following discussion I shall presuppose the concept of practically rigid body, such as is exemplified by a steel rod. We

postulate that the extension of the rod is unchanged by a displacement. Since this assumption constitutes a definition it is a meaningless question to ask whether the assumption is true. The metrical structure of space is now to be studied by investigating the properties of configurations of rigid bodies, or of points on rigid bodies. If such configurations are described by the laws of Euclidean geometry, space is Euclidean.

This method of determining the metrical structure of space lends itself to several interpretations. If one thinks of space as an extensive medium, the structure of configurations reveals the structure of the space in which they are embedded. The rigid body then is to be looked upon as an instrument for exploring space. Just as one explores an electric field with a small electric charge, so one explores space with a rigid body. I think that this is the view of Weyl. The question then occurs, why should the rigid body be chosen as a test body? Electric forces are created by electric charges, and therefore the charge is by definition the proper instrument for exploring the field; but if space is an extensive medium it is not created by rigid bodies. It seems, therefore, more in accord with an empirical point of view to assert that the metrical structure of space is defined by the structure of configurations of rigid bodies. Thus the examination of the method of determining metrical structure reinforces our conclusion that space is a relational structure of things.

The foregoing considerations may be extended to time. Time is a relational structure of processes or events. The metrical structure of time is defined in terms of selected processes. In classical physics the metrical structure of time was defined in terms of mechanical processes, like the vibration of a pendulum, the rotation of the earth, etc. The special theory of relativity was created when Einstein employed electromagnetic processes for the definition of time. In the classical theory the principle of the constancy of the velocity of light was an experimental law which was based upon the prior definition of time in terms of mechanical processes. In the special theory of relativity the principle of the constancy of the velocity of light becomes a definition of the metrical structure of time. The special theory of relativity further achieved the union of space and time in four-dimensional space-time. In the light of our discussion of space, the point of view of this paper is that space-time is the relational structure of events. The metrical structure is defined in terms of configurations of rigid bodies and the course of electromagnetic processes.

The passing reference to the special theory of relativity must now be supplemented by a more detailed discussion. The need for the theory of relativity becomes apparent when we analyze the methods of investigating the metrical properties of space and time.

Considering the problem of space, we must first define the metrical structure more explicitly than in the preliminary account. Accordingly, I define the metrical structure of a space as that of a configuration of rigid bodies at rest with respect to each other. Now in order to perform measurements on such a configuration one must employ a standard rod. Hence the metrical study of space is relative to the standard rod; the conditions under which the rod is employed must be specified precisely. In pre-relativistic physics this problem was ignored.

For precise specification we must introduce the frame of reference with respect to which the rod is at rest. Let us first assume that the structure to be studied is at rest in this frame. If, for example, the structure is a straight rod, we measure the length of the rod by counting the number of times that the standard rod can be laid off on it. The result of our metrical study is expressed by a number relative to the standard. For example, the result of measurement may be that the length of the rod is five meters. Again, in the metrical investigation of a right triangle we can arrive at the Pythagorean theorem, which can be expressed symbolically by $a^2 + b^2 = c^2$, the equation expressing a relation between variable numbers.

Suppose, however, that the structure to be studied is moving with respect to the frame in which the rod is at rest. Then the previously described methods are not applicable. Hence we need, for example, to describe new methods of measuring the length of a rod. In order to study the structure of moving configurations we mark the simultaneous positions of its points on the frame of reference. We then measure the configuration of the representative points of the frame. The application of this definition, however, requires a definition of time. In the special theory of relativity time is defined by the principle of the constancy of the finite velocity of light. In view of the finite velocity the metrical representation of the moving structure differs from that of the same structure at rest. Thus a figure which is judged to be a sphere when at rest is judged to be an ellipsoid when in uniform motion. The description of the metrical structure of configurations varies with motion.

To summarize: a structure is described with respect to a rod in a frame. If the structure moves its relation to the rod is different. It is not surprising, therefore, that the metrical representation of a configuration depends upon its motion relative to the rod.

The discussion thus far, however, seems to have no bearing on the problem of space. We have merely seen that on account of the definition of time in terms of the finite velocity of light the geometrical properties of bodies change with motion. Now the theory of relativity is based upon the further assumption that a set of

frames is equivalent for the study of phenomena. That is, we may study a uniformly moving structure in a frame with respect to which the structure is at rest. The rigid bodies at rest in this frame, which is moving uniformly with respect to the original frame, define a metrical structure of space associated with the moving frame. The metrical properties of the structure relative to the moving frame, in which the structure is at rest, are the same as those when it is at rest in the original frame, and therefore different from those with respect to the frame in which it is in motion. If we define the metrical structure of a space to be that of a set of rigid bodies at rest with respect to each other, then we find that the metrical structure is relative to a frame. That is, space is relative to a frame of reference.

We also seem to have come upon the notion that a space moves with respect to another space. This seems to be self-contradictory since space is that in which motion occurs. Indeed, the concept of space appears to have acquired a new meaning. One may contend that the significance of the theory of relativity is that the geometry of structures depends upon the frame. Thus it appears that one can entertain the hypothesis that the concept of space is to be eliminated from physics like the concepts of the ether and of material substances. From this point of view the proposition that a body is in space means that it is related to a frame of reference. The concept of space is then replaced by that of frame of reference. It appears, however, that one could still think of space as a single medium or void in which the various frames have position. Such a concept is of an indeterminate possibility and appears to be of no use. Nevertheless, if my analysis is correct, it may thus be possible to satisfy both the physical relativists and the philosophical absolutists.

The preceding discussion of the theory of measurement and of the theory of relativity suggests the final topic for consideration in this paper. I wish briefly to consider whether the theory of relativity requires an operational interpretation of physical concepts.

I recall that in order to study the geometry of a structure one uses a rod in a frame of reference. By operations with the rod one obtains numbers which satisfy certain functional relations. Now the classical physicist assumed that he directly studied properties of physical reality and that the laws were functional relations between properties. The view of the writer is that the numbers assigned to the properties are the subject-matter of physical theory. In classical physics it was believed that one directly studied the geometrical properties of a structure; one overlooked the part played by the standard rod. The relativistic theory is based upon the fact that we observe a relation between the structure and the

rod. The relation is represented by a number. One may now ask the question, is not this relation the true subject of our equations? That is, can physics be relativistic without being operational?

In answer one may assert that the nature of the relation is described or defined by the procedure of obtaining the number. If we merely refer to the relation between the moving structure and the rod the relation is indefinite.

The view adopted in this paper is that the equations express functional relations between numbers. The fundamental numbers are obtained by a physical operation such as must be performed in a measurement of length. In this sense the theory of relativity is based upon an operational theory.

One might contend that the real subject of physical investigation is, not the number, but the operation. It appears to me, however, that if one wishes to go behind the numbers the object of investigation is coincidences or possibilities of coincidence. The fundamental characteristic of the operation of measuring length is the observation of coincidences of the end points of the standard rod with points on the rod whose extension is being measured. Now a coincidence is a type of physical phenomenon. The physical operations in measurement are for the purpose of bringing about the phenomena. Thus the operation is a means and not an end. An experiment is performed in order to enable one to obtain observations; the description of the experiment is not the observation. The data of physical investigation are then sets of coincidences.

We may now give a new definition of space or space-time; it is the relational structure of possible coincidences. In the general theory of relativity the law of gravitation expresses the relation between matter and the metrical properties of the structure of possible coincidences. The law of motion of a particle is that it describes a geodesic in curved space-time.

Let us again consider whether space-time is to be viewed as a substance, whose structure is revealed by the relational structure of coincidences, or whether it is merely the relational structure. Weyl and Reichenbach appear to hold that curved space-time constrains the particle in its motion. Thus there is a disposition on the part of relativists to speak as if space-time were a substance. It is the point of view of the present paper that the empirical point of view requires the relational interpretation. Thus the statement of the law of motion of a particle does not express a constraint by a substance, but only a description of the motion in the relational structure.

V. F. LENZEN.

UNIVERSITY OF CALIFORNIA,
BERKELEY.

BOOK REVIEWS

Samuel Johnson: His Career and Writings. Edited by HERBERT and CAROL SCHNEIDER. New York: Columbia University Press. 1929. xvii + 526 pp.; viii + 603 pp.; ix + 641 pp.; xiii + 397 pp.

A notable service has been performed in these four sumptuous volumes on the career and writings of Samuel Johnson, the first president of King's College and our first native idealist. In the first volume concerning Johnson, the philosopher, Professor Schneider offers new light on the baffling problem of the failure of a notable form of idealism in our Colonial days. While it is doubtful if Johnson directly influenced Jonathan Edwards in his idealistic treatment of the Puritan theology, yet he himself derived his inspiration directly from the good Bishop Berkeley. In spite of Berkeley's fame and social standing, his metaphysics had but slight effect on this side of the water. For this four new reasons have been adduced: "The Anglican clergy were neither competent nor interested in technical philosophy. The physical scientists, or 'natural philosophers,' like Franklin and Colden, regarded it as merely ingenious and too fantastic. The theologians whom it might have interested were captivated by the idealism of Edwards, which was at once more orthodox and more familiar, and hence more plausible. And as for the schools and academies, they found Paley less original, less provocative, more fashionable, hence more teachable."

There were, of course, other reasons for the public's indifference to idealism; this was an age of commercial expansion and the winning of the West interested men more than speculations in pure thought. Again wars and rumors of war disturbed men's minds, Johnson himself being much perturbed by the news of Braddock's defeat and the loss therein of some of his particular friends. But what probably caused the comparative failure of such an interesting work as the *Elementa Philosophica* was its conservative spirit. In a way this beautiful little book denoted a humane reaction against the more sinister doctrines of Puritanism, such as infant damnation and eternal punishment, but it did not go the whole way in presenting natural religion and free thinking. The reason for this was largely political. As an adherent of Anglicanism Johnson may have caught much of the urbanity of the Church of England, but that church was founded on Episcopacy, and Episcopacy, to the independent Yankee, represented abject dependence upon the British crown.

Unfortunately Johnson himself put a political twist upon his religious beliefs. There was no reason, as he said, that the church

should not have bishops, at least two, or three, in this vast tract, to ordain and govern their clergy, and instruct and confirm their laity. Hence he put this question to the author of the *London Magazine:* "Whether it would not be a wise expedient that along with the appointment of bishops some gentleman of great dignity and worth should be appointed by the King to be in the nature of a viceroy or lord-lieutenant." This would never do, and Johnson's proposals gave good ground for the ultra-Americans to oppose the establishing of King's College in New York. Owing to this opposition the college began in a small way, there being only a handful of pupils in what Johnson described as "one of these dark corners of the earth where books and the means of knowledge are so much wanted."

It must be said that Johnson's own textbook was worth a ship load of those metaphysical cobwebs such as he was brought up upon in Yale College. But his own *Elementa Philosophica* contains two valuable features, first a compendium of philosophy which in its classification of the sciences and various branches of learning furnished to its young readers a most valuable Orientation course. Another feature was the attitude of this work toward what Johnson was wont to call the infant mind. At a time when Jonathan Edwards, with his professional pessimism, referred to children as "young vipers," Johnson wrote as follows: "They are not to be treated as trifling fondlings . . . but as creatures of some importance in the world to be nursed up and ripened with great care and diligence, and the best way to teach them to exercise their reason is to converse with them as reasonable creatures and reason with them."

These views of Johnson apparently appealed to Franklin, for the latter published Johnson's book and saw that it was used as a required text in the Academy of Philadelphia. How Franklin dangled this as a bait before Johnson, along with certain attractive offers of salary and emoluments, is an amusing story. But in spite of this use of the book in Philadelphia and New York that use did not spread further North. From the time that Johnson was read out of Yale College for joining the Church of England he was never at peace with the authorities at New Haven and the story of the bigotry of his Alma Mater makes painful reading. He expostulated with Thomas Clap and regarded it as an inconsistency that he could accept "such vast benefactions from gentlemen of the church of England," such as Elihu Yale and Bishop Berkeley, and at the same time fine some of his students for attending services in the Church of England, even in the case of two sons who attended the services conducted by their own father. However it must be said that such expostulations were not entirely disinterested, for Johnson long fought against the established Congregational church of Connecticut

which prevented a fair share of the public tithes going to the Church of England Society which he represented.

The autobiography and letters of Johnson given in the first volume of this series furnish a perfect mine of information for those interested in the beginnings of our Colonial colleges. In spite of a certain religious conservatism, and of the ecclesiastical quarrels in which he was engaged, Johnson left the impress of his personality upon King's College. The rules and regulations for the students were very liberal for that day. It was not a mortal sin to cut chapel, for non-attendance was penalized not by loss of face, but by loss of cash. Again, the books which the students could read were not censored as they were at Yale and Harvard and Princeton. Finally King's College, being located in the metropolis, from the very first had a cosmopolitan air, and to those who do not despise the day of small things it is no surprise to learn that an institution which began with seven students should now number tens of thousands.

WOODBRIDGE RILEY.

VASSAR COLLEGE.

The Puritan Mind. HERBERT WALLACE SCHNEIDER. New York: Henry Holt & Company. 1930. 301 pp.

It has long been a paradox how an insignificant Oriental tribe on the other side of the globe should have so vitally effected the great continent of North America; in other words, why the Jews and their sacred writings should have brought about the Puritan mind which still rules in our midst. Upon this question Professor Schneider throws unexpected light. As he says: It would be difficult to understand how a tradition as foreign as the Hebraic account of history could be so firmly implanted in American soil, had it not possessed an initial relevancy and moral vitality. The Puritans, as he further explains, turned to scripture not only on account of its authority as inspired, but because it gave them comfort and counsel in similar experience. This similarity was pointed out in Cotton Mather's *Magnalia,* where New England was called "The American Desert," and where the "divine slaughter" of the Pequots was likened to the Hebrew's ways with the heathen. But underneath these similarities lay the deeper philosophic theory of manifest destiny. As the Jews were guided by divine predestination, so were the Yankees, and the Commonwealth of Massachusetts became a counterpart of the ancient chosen people.

In resolving this paradox of history the author somewhat contradicts himself in his Prologue where he asserts that Puritan New England tradition, together with its problems and ideas, has all

but disappeared and we turn to it, if indeed we do, not because it forces itself upon us, but because we occasionally visit the monuments and tombs of a buried antiquity. This conclusion is perhaps based on Professor Schneider's distaste for Jonathan Edwards and his followers. We may agree with him that logic choppers, like Hopkins and Dwight, produced works about as appetizing as so many bales of hay, yet, as is later acknowledged, it would be unjust to Puritan theology to give the impression that it was buried utterly by Edwards' disciples. The theology may have perished, but the theocracy remains. As the matter has been put by Henry Bamford Parkes in his recent work on *Jonathan Edwards, the Fiery Puritan:* "It is hardly a hyperbole to say that, if Edwards had never lived, there would be to-day no blue laws, no societies for the suppression of vice, no Volstead act."

The Puritan mind is still with us, but in a disguised and diffused form. As the New England Commonwealth was founded in large part as a missionary society for the Indians, so the United States, according to such organizations as the Methodists' Board of Morals and the W. C. T. U., is a society for moral uplift. Foreigners have noticed this and smiled at statements regarding our noble experiment of prohibition, and America as the moral leader of the world. The subject could be pursued further, since modern Puritanism, like Colonial Puritanism, has its black side. The present-day bootleggers and gangsters were matched by such an organization as the Royal Assiento Company through which certain pillars of the church in Massachusetts exported African rum to the coast and imported slaves into New England. In addition there were such real estate speculators as the royal governor who seized the lands of the Stockbridge Indians and distributed them in blocks to his friends and relations.

The Puritan mind could justify these "wars of the Lord," for the Indians were the "spawn of hell," but the enemies within were perhaps more dangerous than those without, and what the author has to say about Roger Williams makes rich reading. This father of religious toleration in America arrived at his liberality in an indirect way. He started as a sectarian who contended that he alone knew the truth and that all the New England churches should adopt his idea. As the matter is put here in a neat paradox: "He began by trying to make the Holy Commonwealth absolutely holy; he ended in a thorough disillusionment about the entire theory." It was for this reason that Rhode Island became a refuge for all sorts of religious misfits. The Quakers, for instance, were an impossible set of people who could no more get along in Massachusetts than the early Christians could in Rome. History in a way re-

peated itself, for it seemed as subversive of authority, when the Quakers would not remove their hats in court, as it did when the followers of the Lord would not throw a bit of incense on the altar of the Emperor.

Professor Schneider's work is rich in suggestive paradoxes. Thus the chapter on the "Great Awakening" shows that Edwards was driven from his pulpit because his parishioners did not wish it to come out that their sons and daughters were reading "lascivious" books. Again the chapter on "The Discovery of England" shows how an easy-going form of deism, such as that in the Church of England, was slow in gaining a foot-hold in America because the question of Episcopacy was complicated by the question of Independency. English bishops were considered agents of the British crown and for this reason a liberal and tolerant scholar like Dr. Samuel Johnson, the first president of King's College, had comparatively slight influence upon philosophic thought, an interesting point which Professor Schneider has brought out at greater length in his four volume edition of Johnson's works. In the remainder of the present work the reader will find much stimulating reading in the further chapters portraying the interrelations of the Declaration of Independence with the decline and fall of the Puritan theory and also the final chapter on "Ungodly Puritans," dealing with those subtle critics of Puritanism, Benjamin Franklin and Nathaniel Hawthorne.

WOODBRIDGE RILEY.

VASSAR COLLEGE.

JOURNALS AND NEW BOOKS

REVUE DE METAPHYSIQUE ET DE MORALE. 39 Année, No. 1. Correspondance inédite, publiée par A. Peyre: *Ch. Renouvier et Louis Ménard.* De la vraie et de la fausse conversion (*suite*): *L. Brunschvicg.* Sur le mythe de la politique: *P. M. Schuhl.*

THE PERSONALIST. Vol. XIII, No. 2. Creative Ideas in Western History: *R. T. Flewelling.* A Study of Spinoza: *B. A. G. Fuller.* Bowne's Doctrine of Freedom: *C. D. Hildebrand.* Carr's Contribution to Personalism—II: *J. W. Buckham.*

Gurvitch, Georges: L'Idée du Droit Social. Notion et Système du Droit Social. Histoire doctrinale depuis le XVII^{e} siècle jusqu'à la fin du XIX^{e} siècle. Préface de Louis Le Fur. Paris: Recueil Sirey. 1932. ix + 713 pp.

Gurvitch, Georges: Le Temps Présent et l'Idée du Droit Social. Paris: J. Vrin. 1932. xvi + 333 pp.

Hirsch, N. D. M.: Genius and Creative Intelligence. Cambridge: Mass.: Sci-Art Publishers. 1931. 339 pp. $3.00.

Itard, Jean-Marc-Gaspard: The Wild Boy of Aveyron. (Rapports et Mémoires sur le Sauvage de l'Aveyron.) Translated by George and Muriel Humphrey. Introduction by George Humphrey. (Century Psychology Series.) New York: Century Co. 1932. xxi + 104 pp. $1.25.

Joël, Karl: Wandlungen der Weltanschauung. Eine Philsophiegeschichte als Geschichtsphilosophie. Leiferung 11, Band II, Bogen 41–45. Tübingen: J. C. B. Mohr (Paul Siebeck). 1932. Pp. 641–720. 3.50 M.

Marburg, Clara: Sir William Temple. A Seventeenth Century "Libertin." New Haven: Yale University Press. 1932. xviii + 128 pp. $2.00.

Murchison, Carl, editor: A History of Psychology in Autobiography. Vol. II. Worcester: Clark University Press. 1932. xvii + 407 pp. $5.00.

Pitkin, Walter B.: A Short Introduction to the History of Human Stupidity. New York: Simon and Schuster. 1932. xii + 574 pp. $3.50.

University of California Publications in Philosophy: Studies in the Nature of Facts. Volume 14, pp. 1–232. Berkeley: University of California Press. 1932.

Jolivet, Régis: Études sur le Problème de Dieu dans la philosophie contemporaine. Lyon et Paris: Emmanuel Vitte. 1932. 240 pp.

Neunzehntes Jahrbuch der Schopenhauer-Gesellschaft für das Jahr 1932. (Ausgegeben am 22 Februar 1932.) Heidelberg: Car Winters Universitätsbuchhandlung. xii + 433 pp. 11 M.

Robinson, Edward S.: Association Theory To-day. (Century Psychology Series.) New York: Century Co. 1932. viii + 142 pp. $1.50.

Schoen, Max: Art and Beauty. New York: Macmillan Co. 1932. 230 pp. $2.00.

Shryock, John K.: The Origin and Development of the State Cult of Confucius. (Published for the American Historical Association.) New York: Century Co. 1932. Limited edition. xiii + 298 pp. $4.00.

Sée, Henri: Science et Philosophie d'après la Doctrine de M. Émile Meyerson. Paris: Félix Alcan. 1932. 203 pp. 15 fr.

McTaggart, J. McT. E.: A Commentary on Hegel's Logic. Second Impression. Cambridge: At the University Press. New York: Macmillan Co. xv + 311 pp. $4.00.

Collected Papers of Charles Sanders Peirce. Edited by Charles Hartshorne and Paul Weiss. Volume II: Elements of Logic. Cambridge: Harvard University Press. 1931. xi + 535 pp. $6.00.

Combes, Marguerite: Le Rêve et la Personnalité. Préface de André Lalande. (Bibliothèque de la Revue des Cours et Conferences.) Paris: Boivin & Cie. 1932. 267 pp. 20 fr.

Harlow, Victor E.: A Bibliography and Genetic Study of American Realism. Oklahoma City: Harlow Publishing Co. 1931. 132 pp.

Haserot, Francis S.: Essays on the Logic of Being. New York: Macmillan Co. 1932. 641 pp. $4.00.

Jackson, A. V. Williams: Researches in Manichaeism. With Special Reference to the Turfan Fragments. New York: Columbia University Press. 1932. xxxviii + 393 pp. $5.00.

NOTES AND NEWS

To the Editors of the Journal of Philosophy:

During the night before Christmas Eve, a disastrous fire destroyed a large portion of the Library of the University of the Witwatersrand, which, pending the erection of a permanent library building, had been housed in a temporary structure.

Among the books destroyed by the blaze were many philosophical and psychological works by American scholars. Owing to my own connection with Harvard and other American university institutions and my many personal friendships with American thinkers, the works of American philosophers and psychologists were probably better known to, and more extensively used by, my students than by those of most other British universities. Hence the loss of many American works is particularly serious.

Unfortunately, the loss is only in small part covered by insurance; and it will be readily understood that, in the midst of the present world-wide depression, it is difficult to raise the sum required for the re-purchase of all the books which have been lost.

In these circumstances, I venture to appeal to all American philosophers and psychologists, and especially to my old colleagues and friends, for the gift of author's copies of their own writings or duplicates from their libraries, to help me build up again, as soon as possible, a working library for my students.

Every such gift—addressed to the Librarian, University of the Witwatersrand, Johannesburg, South Africa—will be gratefully acknowledged, and the names of the donors, together with the occasion of the gift, will be recorded in the volumes themselves.

R. F. Alfred Hoernlé.

University of the Witwatersrand.

The program of the Thirty-third Annual Meeting of the Western Division of the American Philosophical Association, which met at the University of Michigan, March 24–26, 1932, is as follows:

THURSDAY, MARCH 24

2 p.m.

The Development of James's Pragmatism Prior to 1879
Maurice Baum
Mr. Broad and the Case for the Sensum Theory.....*George Gentry*
"The Parmenides" in the Light of the Propositional Function
Eleanor Bisbee
The Sources of Bradley's Antinomies of the Good.....*J. H. Farley*

8 p.m.

Annual Smoker

FRIDAY, MARCH 25

9 a.m.

Current Scepticism of Metaphysics.....*W. S. Gamertsfelder*
Relational Categories and the Quest for Unity.....*Marvin Farber*
Some Philosophical Implications of Present Day Physical Theories
E. B. McGilvary

11:30 a.m.

Business Meeting

2 p.m.

Section A—Problems of Epistemology

The Psychology of Heraclitus.....*M. T. McClure*
Epitomization and Epistemology.....*George P. Conger*
The Philosophic Uses of Experimental Psychology
Charles Hartshorne
The Genetic Approach to the Ego-centric Problem....*J. A. Melrose*

Section B—Problems of Induction

The Logical Character of the Principle of Induction..*Herbert Feigl*
The Mystery of Scientific Discovery.....*A. C. Benjamin*
The Concepts of Order and Probability in the Writings of Cournot
Merritt H. Moore
The Existential Status of Facts and Laws of Physics..*Karl Schmidt*

5 p.m.

Tea

7 p.m.

Annual Dinner

Presidential Address: Philosophy and the Problem of Value
A. P. Brogan

SATURDAY, MARCH 26

9 a.m.

Conscience as a Function of Doing-Suffering.....*T. V. Smith*
Types of Moral Judgments.....*Glenn R. Morrow*
Axiology as the Logic of the Social Sciences.....*Howard O. Eaton*
Meaning and Value, A Study of the Neo-Kantian Philosophy of Value .....*Bonno Tapper*

Henry Holt & Company, New York, who published in 1929 the *Essays in Honor of John Dewey,* have announced that they are disposing of the remaining stock of this volume at seventy-five cents per copy.

Dr. F. S. C. Northrop, Associate Professor of Philosophy at Yale University, has been awarded a fellowship from the John Simon Guggenheim Memorial Foundation for 1932–1933 to review and evaluate current conceptions of the nature of mathematics and formal logic.

Professor John Baillie of Union Theological Seminary will give the 1932 Lecture Series of the Charles F. Deems Lectureship in Philosophy at New York University, Washington Square College, on April 6, 7, 8, 13, and 14. The general subject, "The Religion of the Stoics and its Relation to Christianity," will cover the following topics: The Painted Colonnade; The Education of Zeno; The Stoic Rule of Life; The Stoic Creed; Stoicism and Christianity.

The officers for the coming year of the Western Division of the American Philosophical Association, elected at the meeting at Ann Arbor, March 25, 1932, are as follows: President: M. T. McClure; Vice President: G. P. Conger; Secretary-Treasurer: E. T. Mitchell; Members of the Executive Committee: E. A. Burtt; J. H. Farley; C. B. Vibbert; A. E. Avey; Karl Schmidt.